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| Descrizione fisica      | 1 online resource (932 p.)   |
| Altri autori (Persone)  | TolkAndreas  |
| Disciplina              | 355.4/80285  |
| Soggetti                | War games - Data processing<br>Military art and science - Computer simulation<br>Combat - Mathematical models<br>Combat - Simulation methods   |
| Lingua di pubblicazione | Inglese  |
| Formato                 | Materiale a stampa   |
| Livello bibliografico   | Monografia   |
| Note generali           | Chapters 1-15 written by Andreas Tolk; chapters 16-32 written by various authors.  |
| Nota di bibliografia    | Includes bibliographical references and index.   |
| Nota di contenuto       | Challenges of combat modeling and distributed simulation -- Applicable codes of ethics -- The NATO code of best practice for command and control assessment -- Terms and application domains -- Scenario elements -- Modeling the environment -- Modeling movement -- Modeling sensing -- Modeling effects -- Modeling communications, command and control -- Challenges of distributed simulation -- Standards for distributed simulation -- Modeling and simulation development and preparation processes -- Validation and verification -- Integration of M&S solutions into the operational environment -- History of combat modeling and distributed simulation / M.L. Loper & C.D. Turnitsa -- Serious games, virtual worlds, and interactive digital worlds / R. Smith -- Mathematical applications for |

combat modeling / P.T. Hester & A. Collins -- Combat modeling with the high level architecture and base object models / M.D. Petty & P. Gustavson -- Test and training enabling architecture (TENA) / E.T. Powell & J.R. Noseworthy -- Combat modeling using the DEVS formalism / I.-C. Moon & T.G. Kim -- GIS data for combat modeling / J. D. Lashlee, J.L. Bricio, R. Holcomb & W.T. Richards -- Modeling tactical data links / J. Sorroche -- Standards-based combat simulation initialization using the military scenario definition language (MSDL) / R. L. Wittman -- Multi-resolution combat modeling / M.D. Petty, R.W. Franceschini & J. Panagos -- New challenges : human, social, cultural, and behavioral modeling / S.K. Numrich & P.M. Picucci -- Agent-directed simulation for combat modeling and distributed simulation / G.K. Bharathy & I. Yilmaz -- Uncertainty representation and reasoning for combat models / P.C.G. Costa, H. Herencia-Zapana, K.B. Laskey -- Model-based data engineering for distributed simulations / S.Y. Diallo -- Federated simulation for system of systems engineering / R.H. Kewley & M.D. Wood -- The role of architecture frameworks in simulation models : the human view approach / H.A.H. Handley -- Multinational computer assisted exercises / E. Cayirci.

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#### Sommario/riassunto

Explore the military and combat applications of modeling and simulation. *Engineering Principles of Combat Modeling and Distributed Simulation* is the first book of its kind to address the three perspectives that simulation engineers must master for successful military and defense related modeling: the operational view (what needs to be modeled); the conceptual view (how to do combat modeling); and the technical view (how to conduct distributed simulation). Through methods from the fields of operations research, computer science, and engineering, readers are guided through the his

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